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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,113	07/18/2003	Olli-Pekka Pohjola	088245-2346	1632
23524 7590 10/25/2010 FOLEY & LARDNER LLP 150 EAST GILMAN STREET P.O. BOX 1497 MADISON, WI 53701-1497				
EXAMINER				
LIU, LI				
ART UNIT		PAPER NUMBER		
2613				
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10/25/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/622,113

**Applicant(s)**

POHJOLA ET AL.

**Examiner**

LI LIU

**Art Unit**

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 October 2010.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1.4.8-13.15, 16.20.21.23.33.34 and 43-59 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1.4.8-13.15, 16.20.21.23.33.34 and 43-59 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 03 November 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-846)  
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/06/2010 has been entered.

### ***Response to Arguments***

2. Applicant's arguments filed on 10/6/2010 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1, 4, 8-13, 15, 16, 20, 21, 23, 33, 34 and 45-59 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

1). Claim 1, and thus depending claims 4, 8-13, 15, 20, 33 and 34, recites the limitation "the optical router comprises an upstream/downstream wavelength division multiplexer (WDM) configured to route different data modulated pumping light to different optically pumped sources and to route the data modulated transmission light to a multiplexing element". However, according to the original disclosure, each optically pumped source is associated with an upstream/downstream WDM (Figures 6 and 10, [0067], [0068], [0087], [0090] etc, "[r]espective ones of the optically pumped gain elements 1012 and the upstream/downstream WDMs 1014 are associated with each other. Each optically pumped gain element 1012 and associated upstream/downstream WDM 1014 corresponds to a respective ONU (not shown) which is connected separately to the arrangement 1000 by a respective optical fibre 1015"). That is, a plurality of upstream/downstream WDMs are used to "route different data modulated pumping light to different optically pumped sources and to route the data modulated transmission light to a multiplexing element", each optically pumped source is associated with a specific upstream/downstream WDM, respectively. A single upstream/downstream WDM cannot route different data modulated pumping light to different optically pumped sources and to route the data modulated transmission light to a multiplexing element. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

2). Claim 16, and thus depending claims 21 and 23, recites the limitation "the passive kerb location comprises an upstream/downstream wavelength division multiplexer (WDM) ...; routing the data modulated pumping light to at least one of the optically pumped sources via the upstream/downstream WDM; and routing the data modulated transmission light to a multiplexing dement via the upstream/downstream WDM". The at least one of the optically pumped sources can be more than one optically pumped sources. However, according to the original disclosure, each optically pumped source is associated with an upstream/downstream WDM (Figures 6 and 10, [0067], [0068], [0087], [0090] etc, "[r]espective ones of the optically pumped gain elements 1012 and the upstream/downstream WDMs 1014 are associated with each other. Each optically pumped gain element 1012 and associated upstream/downstream WDM 1014 corresponds to a respective ONU (not shown) which is connected separately to the arrangement 1000 by a respective optical fibre 1015"). That is, a plurality of upstream/downstream WDMs are used to route different data modulated pumping light to different optically pumped sources and to route the data modulated transmission light to a multiplexing dement, each optically pumped source is associated with a specific upstream/downstream WDM, respectively. A single upstream/downstream WDM cannot route the data modulated pumping light to at least one of the optically pumped sources via the upstream/downstream WDM and to route the data modulated transmission light to a multiplexing dement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant

art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

3). Claim 45, and thus depending claims 46-52, recites the limitation "the optical router comprises an upstream/downstream wavelength division multiplexer (WDM) configured to route the data modulated transmission light to a multiplexing dement and route the data modulated pumping light to the plurality of optically pumped sources". However, according to the original disclosure, each optically pumped source is associated with an upstream/downstream WDM (Figures 6 and 10, [0067], [0068], [0087], [0090] etc, "[r]espective ones of the optically pumped gain elements 1012 and the upstream/downstream WDMs 1014 are associated with each other. Each optically pumped gain element 1012 and associated upstream/downstream WDM 1014 corresponds to a respective ONU (not shown) which is connected separately to the arrangement 1000 by a respective optical fibre 1015"). That is, a plurality of upstream/downstream WDMs are used to "route the data modulated transmission light to a multiplexing dement and route the data modulated pumping light to the plurality of optically pumped sources", each optically pumped source is associated with a specific upstream/downstream WDM, respectively. A single upstream/downstream WDM cannot route the data modulated pumping light to the plurality of optically pumped sources and to route the data modulated transmission light to a multiplexing dement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

4). Claim 53, and thus depending claims 54-59, recites the limitation "the kerb location comprises an upstream/downstream wavelength division multiplexer (WDM) ...; routing the data modulated pumping light to at least one of the optically pumped sources via the upstream/downstream WDM; and routing the data modulated transmission light to a multiplexing dement via the upstream/downstream WDM". The at least one of the optically pumped sources can be more than one optically pumped sources. However, according to the original disclosure, each optically pumped source is associated with an upstream/downstream WDM (Figures 6 and 10, [0067], [0068], [0087], [0090] etc, "[r]espective ones of the optically pumped gain elements 1012 and the upstream/downstream WDMs 1014 are associated with each other. Each optically pumped gain element 1012 and associated upstream/downstream WDM 1014 corresponds to a respective ONU (not shown) which is connected separately to the arrangement 1000 by a respective optical fibre 1015"). That is, a plurality of upstream/downstream WDMs are used to route different data modulated pumping light to different optically pumped sources and to route the data modulated transmission light to a multiplexing dement, each optically pumped source is associated with a specific upstream/downstream WDM, respectively. A single upstream/downstream WDM cannot route the data modulated pumping light to at least one of the optically pumped sources via the upstream/downstream WDM and to route the data modulated transmission light to a multiplexing dement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant

art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 43 and 44 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 43, and thus depending claim 44, recites the limitation "wherein the optical router comprises a plurality of upstream/downstream wavelength division multiplexers (WDMs) configured to route different data modulated pumping light to different optically pumped sources and to route different data modulated transmission light to a multiplexing element". Claim 1, which the claim 43 depends from, already cites "an upstream/downstream" and "a multiplexing element". It is not clear whether the "an upstream/downstream" in claim 1 is one of the plurality of upstream/downstream wavelength WDMs disclosed in claim 43; and also it is not clear whether the "a multiplexing element" in claim 43 is the same "a multiplexing element" disclosed in claim 1 or not. The claims are indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.



***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LI LIU whose telephone number is (571)270-1084. The examiner can normally be reached on Monday-Friday, 8:30 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Vanderpuye can be reached on (571)272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Li Liu/  
Primary Examiner, Art Unit 2613  
October 21, 2010